

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

Before addressing the grounds of rejection raised in the outstanding Office Action, Applicants take this opportunity to discuss the amendments to Claims 1 and 9. Claim 1 has been amended to recite a varactor structure that includes inner well regions having an upper surface which includes source and drain dopant regions and an outer well region having an upper surface which includes source and drain dopant regions, wherein the source and drain dopant regions of the inner well regions are separated from the source and drain dopant regions of the outer well regions by isolation regions composed of a dielectric material. Similar subject matter is recited in amended Claim 9. Support for the amendment to Claims 1 and 9 is found in Figure 1D of Applicants' disclosure, which clearly depicts where the source and drain dopant regions (identified by reference number 32) that are present in the inner well regions (identified by reference number 20B) are separated by isolation regions (identified by reference number 16) from the source and drain dopant regions (identified by reference number 32') that are present in the outer well regions (identified by reference number 20A). Further support for the amendment to Claims 1 and 9 is found in paragraph 0051 of Applicants' specification. Applicants submit that these features are not taught or suggested by the prior art. Turning to the present grounds of rejection.

Claims 1-3, 6-9 and 12-14 are rejected, under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent Application Publication No. 2003/0122128 to Coolbaugh et al. ("Coolbaugh et al.") in view of U.S. Patent No. 7,053,465 to Benaissa et al. ("Benaissa et al."). Applicants traverse the aforementioned rejection and submit the following.

“To establish a prima facie case of obviousness of a claimed invention all the claimed limitations must be taught or suggested by the prior art”. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 44, 496 (CCPA 1970). Applicants submit that the applied prior art fails to teach or suggest a varactor structure that includes an inner well region and outer well region having an upper surface that includes source and drain dopant regions, wherein the source and drain regions of the inner well region are separated from the source and drain dopant regions of the outer well regions of the varactor by isolation regions composed of a dielectric material, as recited in amended Claims 1 and 9.

Applicants submit that Coolbaugh et al. fails to render Applicants’ invention unpatentable. Coolbaugh et al. fails to teach or suggest a structure including source and drain dopant regions. Referring to page 3 of the Final Office Action, Applicants observe that the Examiner alleges that paragraph 0043 of the Coolbaugh et al. reference discloses source and drain regions present in an upper surface of the Coolbaugh et al. structure. Referring to paragraph 0043 of Coolbaugh et al., as cited by the Examiner, Applicants observe that the portion of the Coolbaugh et al. reference that the Examiner is relying on to meet the claimed limitation of source and drain regions only discloses a sub-collector implant step. Applicants submit that this disclosure fails to teach or suggest a varactor structure that includes an inner well region having an upper surface which includes source and drain regions, wherein the source and drain regions are separated from the outer well regions of the varactor by isolation regions composed of a dielectric material, as recited in amended Claims 1 and 9.

Applicants observe that the above argument was previously presented to the Examiner in Applicants’ response dated March 31, 2009, which was responsive to the previous Office Action dated January 21, 2009. Applicants observe that the Examiner has not modified his rejection

with respect to the alleged teaching of source and drain regions being present in Coolbaugh et al. despite Applicants' arguments to the contrary. More specifically, the Examiner relies upon paragraph 0034 of Coolbaugh et al. on page 3 the Final Office Action dated July 15, 2009 to allegedly meet the disclosure of source and drain regions in the same manner that the Examiner relied upon paragraph 0034 of Coolbaugh et al. on page 3 of the Office Action dated January 21, 2009. Section 707.07(f) of the Manual of Patent Examining Procedure (MPEP) instructs that:

“Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.”

Here, the Examiner has maintained that Coolbaugh et al. discloses source and drain dopant regions based upon paragraph [0034] of Coolbaugh et al. Applicants have traversed this ground of rejection. Applicants traversal has not been addressed. Applicants respectfully request that the Examiner acknowledge that Coolbaugh et al. fails to disclose source and drain regions, or the Examiner clarify his previous arguments in response to Applicants' traversal.

Referring to page 4 of the Final Office Action, the Examiner admits that “Coolbaugh is silent as to wherein the source and drain regions are separated from the outer well regions by the isolation region comprising a dielectric material”. Therefore, Coolbaugh et al. fails to teach or suggest a varactor structure that includes inner well regions having an upper surface which includes source and drain dopant regions and outer well regions having an upper surface which includes source and drain dopant regions, wherein the source and drain dopant regions of the inner well regions are separated from the source and drain dopant regions of the outer well regions by isolation regions composed of a dielectric material, as recited in amended Claims 1 and 9.


Benaissa et al. fails to fulfill the deficiencies of Coolbaugh et al. Benaissa et al. also fails to teach or suggest a varactor structure that includes inner well regions having an upper surface which includes source and drain dopant regions and outer well regions having an upper surface which includes source and drain dopant regions, wherein the source and drain dopant regions of the inner well regions are separated from the source and drain dopant regions of the outer well regions by isolation regions composed of a dielectric material, as recited in amended Claims 1 and 9.

Benaissa et al. discloses a varactor structure in which an isolation region is formed beneath the gate contact to reduce parasitic resistance, which is far removed from Applicants' claimed structure. Referring to Figure 4 of Benaissa et al., as cited by the Examiner on page 4 of the final Office Action, Benaissa et al. discloses a structure that fails to include source and drain dopant regions in an upper surface of the outer well regions of the varactor. Therefore, because Benaissa et al. fails to disclose outer well regions having source and drain dopant regions present therein, Benaissa et al. fails to teach or suggest a varactor structure that includes inner well regions having an upper surface which includes source and drain dopant regions and outer well regions having an upper surface which includes source and drain dopant regions, wherein the source and drain dopant regions of the inner well regions are separated from the source and drain dopant regions of the outer well regions by isolation regions composed of a dielectric material, as recited in amended Claims 1 and 9.

In view of the above, the applied prior art fails to teach or suggest each and every limitation of Applicants' claimed structure, as recited in amended Claims 1 and 9. Therefore, because the applied prior art fails to teach or suggest each and every limitation of Applicants' claimed structure, the present § 103 rejection has been obviated.

Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,



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